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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,699	11/12/2003	Philip Strong	16291-424	9220

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EXAMINER	
CHIN, PETER	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,699	STRONG ET AL	
	Examiner	Art Unit	
	Peter Chin	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11 and 13-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11,13-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-9,11,13-21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1,6 and 9: The claims are incomplete in regard to the weight percent claimed. The basis for the weight percent is the slurry, which has been omitted. The weight percent should be expressed as % by weight of the slurry., see page 3, paragraph (0010) of the disclosure.

The following is additionally noted:

Claim 1 is confusingly written. The preamble of the claim states that the invention is directed to fiber and starch mixture, however the added subject matter is directed to a method of forming a coated paper. It is not clear what is being claimed, the starch and fiber coating composition, coated paper or a process of coating a paper. For the purposes of prosecution, it is assumed that the starch and fiber coating composition is being claimed.

Claims 3,4 and 7: it is not clear what final physical or chemical property is conferred to the final composition by the claimed use of a pressure screen. The limitation appears to be a purely method limitation.

Claim 6: The claim states that the paper mat is coated with a mixture of starch and fiber at certain weight percents, presumably based on the weight of the slurry. However, the claim fails to state what the add on is and thus, it is not clear what amounts of starch and fiber are present on the paper mat.

Claim 8 is a product claim: it is not clear what physical or chemical property is conferred to the final product, which is a paper product, by spraying the mixture of starch and fiber. The claimed limitation appears no more than a method limitation that imparts no patentable weight to the claim.

Claim 9, lines 3 and 4 state that the process water is deposited from the head box onto the wire screen. This recitation is incomplete since it is the pulp and the process water that is being deposited on the forming wire, note line 2 of the claim. Also, the claim is incomplete and misleading, thus vague and indefinite for stating that the source of starch and fiber is accepts from the white water pressure screen. Starch must be added somewhere in the process in order to provide the fiber pulp and process water with starch before the pulp and process water is drained or dewatered on the forming wire to form the sheet and white water containing fines and starch.

Claim 18 should state that the starch and fiber mixture does not contain flocculant rather than "does not comprise flocculant".

2. Claims 1,3-5,18 and 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, alternatively 35 U.S.C. 103(a) as being unpatentable over Pruszynski (5,42,087) with or without Bradner (2,197,463).

Pruszynski shows a mixture of granular starch and fiber in vessel 25. Cellulosic fiber in white water collected in white water silo 16 is present in an amount of between 0.1 to 0.5%. The white water containing fiber is mixed with granular starch in vessel 25; there is no addition of flocculant at this point in the process, see column 4, lines 36-50. The present claims read on the aqueous mixture of fiber and starch in vessel 25. Note

that the granular starch is not cooked and thus, Pruszynski anticipates the claims. However, if evidence is necessary to show that granular starch is uncooked when incorporated into the fiber slurry would have been obvious, Bradner teaches that that granular starch is uncooked and remains until it is heated and cooked in the dryer. Note in regard to the recitation that the starch mixture is applied to and remains on the paper mat where upon the starch is subsequently cooked is a statement of intended use of the starch fiber mixture and imparts no patentable weight. Additionally, claims 3 and 4: the mere recitation of the use of a pressure screen does not impart any patentable weight to the product claimed as it is a method concept that does not impart any limitation as the physical or chemical properties of the fiber, e.g., no fiber length is imparted by such a bare recitation. White water is a term of art applied to the water drained from the forming wire in papermaking.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pruszynski (5,942,087) in view of Bleakley (5,830,364).

The claimed fiber length of the fibers in Pruszynski is obvious since the fibers in the white water are typically below 75 microns (below 0.08 inches), column 4.

4. Claims 6-8 are rejected under 35 U.S.C. 103(a) as obvious over Taylor et al (5,997,692) in view of Glomb et al (5,411,637).

Taylor discloses a paper product containing starch of improved strength properties. The paper is the product of the process where in a wet web of paper is formed on the forming wire and is surface impregnated by a slurry of uncooked starch particles. Thus, the surface layer of the paper product is a mixture of fibers and starch

particles. Taylor is silent as to cooking the starch granules however this would have been obvious as it is conventional practice necessary to activate the bonding capability of starch as evidenced by Glomb et al. Note that the present claims are presented as product by process claims. The claimed weight percents of the starch and fiber are not of the final product, i.e., the paper mat and in fact it is not known what the weight percent is based on as noted in the above 35 USC 112 rejection. The method limitation of claim 7 and the method of spraying in claim 8 do not impart any patentable distinction as to the final product characteristic in the absence of any evidence to the contrary and thus these claims do not define over the prior art .

5. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vikio (5,449,437) in view of Bleakley (5,830,364).

Vikio discloses a method of treating white water. Fines are recovered from white water by passing it through screen device 30, Figure 2 . Visio further teaches the reuse of the fines in the papermaking process. This screen is disclosed as either a pressureless screen or a pressurized screen. In the absence of any unexpected results it would have been obvious to select the pressurized screen to recover the fines. Additionally the claimed fiber length for the fines are well known to be below 0.08 in as evidenced by Bleakley who teaches that fines are characterized by fibers no greater than 75 microns in length, column 4. Claim 21: it would be obvious to use any pressurized screen including the one claimed as long as it is capable of separating or recovering fines.

6. Claims 9,11,13-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Matsuda et al is withdrawn from the rejection of the claims in view the amendment to the claims

8. The arguments presented against Pruszynski are based on the Pruszynski's use of a flocculant. However as noted above, claims 18 and 19 read on the white water containing fiber that is mixed with granular starch in vessel 25 where there is no addition of flocculant at this point in the process, see column 4, lines 36-50. The rejected claims read on the aqueous mixture of fiber and starch in vessel 25.

9. The arguments presented against Visio are not convincing since white water in papermaking is a term of art for water drained during web formation on the forming wire. Visio does disclose screen 30 which is pressure or non-pressure screen, reject and accept streams are shown in Figure 2.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (571) 272-1186. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Chin
Primary Examiner
Art Unit 1731